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Students' interest in an entrepreneurial career in a multicultural society

Research Memorandum 2011-34

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Students' Interest in an Entrepreneurial Career in a Multicultural Society

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Abstract

This paper aims to investigate the diverse attitudes, career motivations and perceived leadership skills of university students in the Netherlands and to analyse, compare and evaluate their interest in entrepreneurship, inter alia on the basis of gender and ethnic differences. Since the main factors that affect career choice tend to begin early in life, this paper focuses essentially on the *next generation of entrepreneurs*, in particular on their career motivations, attitudes and self-perceptions. The data and information used in our exploratory analysis are based on a survey conducted among students in four carefully selected universities and seven universities of professional education (so-called HBOs) in the Randstad metropolitan area in the Netherlands (including Amsterdam, Rotterdam, The Hague and Utrecht) from September to December 2009. The first descriptive results of our comparative evaluation on the basis of a sample of students are based on 1212 survey questionnaires answered and returned by university students. The findings show that there are gender- and ethnic-based differences in the entrepreneurial interest of university students. The interest in entrepreneurship as a career line is higher among immigrant males than among native males, while migrant females and males are more motivated by 'external factors' such as family and friends, prestige, and also financial gain. Furthermore, the interest in entrepreneurship as a career appears to be lower among female than among male students, while female students are more motivated by 'internal factors' such as using their own skills and abilities. The results of our comparative evaluation also show that factors such as being their own boss, flexibility, independence etc. are equally important for both males and females. A further analysis of our results indicates that if the current dreams and plans of university students are realized, there will be a higher probability that paid jobs in the private sector will be held by the native Dutch, while paid jobs in the public sector will be held by females. Finally, various new jobs will be created by immigrants, in particular by Antilleans, Surinamese and Turks. While gender differences will decrease, and the behaviour of males and females in business will converge, cultural differences will remain in the near future.

1. Introduction

Modern cities are powerhouses of economic vitality and innovative potential. They are based on agglomeration economics, knowledge intensity, creative minds and diversified labour markets (see also Olfert and Partridge, 2011; Ottaviano and Peri, 2006). Higher education institutions in urban areas offer an enormous growth potential for human talent and reinforce the role of these areas as socio-economic centripetal and centrifugal hubs in an open modern space-economy. Entrepreneurship is one of the critical success conditions for the strong economic position of urban agglomerations. But do higher education institutions induce entrepreneurial spirits and attitudes?

Today's students represent tomorrow's entrepreneurs and leaders, yet little is known about this generation's attitudes towards careers in business and entrepreneurship. While extensive research has been undertaken to better understand the motivations of adults in starting their own ventures, there is little insight into the motivations and needs of today's adolescents. Similarly, there is little understanding of the differences that exist between different ethnic groups and between the genders. Only a few empirical studies have examined the entrepreneurial propensity of university students as a source of future entrepreneurs.

Therefore, this study aims to examine the potential interest of both native and immigrant young people in entrepreneurship and the key factors affecting their interest. The objectives of the study are:

- to measure and compare the entrepreneurial interest of native and immigrant youth;
- to understand native and immigrant youth's attitudes and motivations towards careers in entrepreneurship;
- to evaluate gender- and ethnic-based differences in attitudes, self-perceptions and motivations towards entrepreneurship;
- to identify the possible features and composition of the future labour market in the Netherlands.

On the basis of these objectives, our study also aims to test three groups of hypotheses which cover ethnic- and gender-based entrepreneurial interest, motivations and risk-averse attitudes. These three groups of hypotheses are the following:

Hypotheses on Ethnic- and Gender-based Entrepreneurial Interest:

- The level of interest in entrepreneurship is related to ethnicity: immigrants' interest is higher. Therefore, interest in entrepreneurship as a career is lower among Dutch youth than among immigrant youth.

- The level of interest in entrepreneurship is related to gender: the males' interest is higher. Therefore, interest in entrepreneurship as a career is lower among female than among male students.

Hypotheses on Motivation:

- Females interested in entrepreneurship are more likely to be motivated in their career choices by social and relational factors: Females are more motivated than males by factors such as working with others, having good social relationships and earning respect.
- Male students interested in entrepreneurship are more likely to be motivated in their career choices by autonomy. Financial gain is a strong motivator for males in general.

Hypotheses on Risk-averse Attitude:

- Respondents with a low interest in entrepreneurship are more risk-averse than are those with high interest.
- Females are more likely to have a lower propensity for risk-taking in the current socio-economic context.

An overall objective of the study is to highlight the critical factors for an entrepreneurial future in a multicultural society. Therefore, the study focuses, in particular, on the multicultural environment in higher education in the Netherlands. Section 2 below examines the entrepreneurial interest of university students as a source of future entrepreneurs, while also addressing the limited number of empirical studies undertaken them for. Next, Section 3 evaluates higher education in a multicultural environment in Europe and specifically in the Netherlands. Section 4 describes the survey conducted in the Netherlands, and summarizes the empirical results. This section compares and evaluates, in particular, the ethnic- and gender-based entrepreneurial interest and motivation among university students. Finally, Section 5 discusses the results of the study and highlights the potential impacts of the current dreams and plans of university students on the future labour market in the Netherlands.

2. Entrepreneurial Interest of University Students as a Source of Future Entrepreneurs

The success of the young entrepreneurs behind YouTube, Facebook and Skype has inspired a growing number of young, energetic and self-reliant people to start their own business in recent years. The idea that entrepreneurship is a viable career path has been ingrained in the minds of young people – especially students – and their parents. Young people have been attracted as never before to the idea of starting their own business, while interest in entrepreneurship has developed earlier and earlier among young people in the last decade. For example, a national sample survey of US high school students reported that 67 per cent wanted to start a business on their own (Kourilsky and Walstad, 1998). On the other hand, more and more students have joined business schools with the intention of becoming entrepreneurs. According to Timmons (1994), one third of Harvard Business School (HBS)

graduates ended up working for themselves, while 90 per cent of HBS students have the dream of being self-employed. Colleges and universities have started to offer courses in business, including encouraging students to set up small businesses. Governments and higher education institutes have also woken up to the job-creating capacity of start-up businesses and have established new entrepreneurship education programmes. More educational programmes have led to more business plan contests, more resources and more funding. There has been a major change since the early 1990s in the education programmes of high schools, universities for professional education, and universities.

In parallel with these developments, entrepreneurship education has become an important topic in entrepreneurship studies (for a comprehensive overview, see Gorman et al., 1997; Katz, 2003; Meyer, 2001). The research has addressed the question of how entrepreneurship education can become more effective. However, this research has been rather limited in investigating the level and determinants of interest in entrepreneurship among students. The few empirical studies show that there are two streams in the research on students' entrepreneurial interest. One stream has focused on the key background factors, such as gender, ethnicity, family experience and educational level, which affect entrepreneurial interest (Wilson et al., 2004; Wang and Wong, 2004). The other stream has developed a modelling approach from a social psychology perspective and addressed the entrepreneurial intentions and new venture formation (Audet, 2004; Krueger et al., 2000; Li, 2006; Veciana et al., 2005). In this stream, two main theory-driven models have been used by researchers: the Theory of Planned Behaviour by Ajzen (1991) and the Entrepreneurial Event Model by Shapero and Sokol (1982).

According to Ajzen's Theory of Planned Behaviour (TPB) there are three conceptually independent determinants of intention: *attitude toward the behaviour*, *subjective norms*, and *perceived behavioural control*. Attitude toward behaviour "*refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question*". The second determinant, subjective norms, "*refers to the perceived social pressure to perform or not to perform the behaviour*". And, the third determinant, perceived behavioural control "*refers to the perceived ease or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles*". According to Ajzen: "*As a general rule, the more favourable the attitude and subjective norms with respect to a behaviour, and the greater the perceived behavioural control, the stronger should be an individual's intention to perform the behaviour under consideration*" (Ajzen, 1991: 188). In other words, intentions in the TPB depend on perceptions of personal orientation to entrepreneurship, social norms, and feasibility.

The intention model by Shapero and Sokol (1982) was developed specifically for the field of entrepreneurship, and is called the Entrepreneurial Event Model (EEM). According to Shapero and Sokol, decisions change direction significantly in life as a result of an event or break in the established routine. In the EEM, the entrepreneurial intentions depend on three

elements; *perception of personal desire to be an entrepreneur, feasibility, and propensity to act*. Perception of desirability in the EEM considers a combination of the first two variables in the TPB, attitude and social norms, while perception of the feasibility in EEM is similar to the third variable, perceived behavioural control in the TPB. In EEM, the intent to start a business derives from perceptions of both desirability and feasibility.

A combination of these two intention-based models, the TPB and the EEM, has also been used by researchers (Krueger and Brazeal, 1994; Krueger et al., 2000). In addition, Krueger et al. (2000) tested and compared both models. They found strong statistical support for both models, but the model of Shapero and Sokol was found to be slightly superior to that of Ajzen. On the basis of their comparative analysis Krueger et al. (2000) suggested that intentions are the best predictor of any planned behaviour including entrepreneurship, while intentions predict behaviour. In turn, certain attitudes predict intention, and intention models predict, rather than explain, any planned behaviour better than either individual or situational variables. They argued that personal and situational variables have an indirect influence on entrepreneurship through influencing key attitudes and general motivation to act, whereas intention-based models describe how exogenous influences change intentions and venture creation. They have also argued that the versatility and robustness of intention models support the broader use of comprehensive, theory-driven, testable process models in entrepreneurship research. In short, intention models offer a significant opportunity to better understand and predict entrepreneurial activity.

The empirical results of the studies in the above-mentioned first stream that aim to investigate the level and determinants of interest in entrepreneurship among students (Wilson et al., 2004; Wang and Wong, 2004) show some interesting and significant variations across gender, ethnicity and family background. The results of two studies – two large surveys – one including over 5000 middle and high school students in four geographic states in the U.S. (Wilson et al. (2004), and the other one including 5326 undergraduate students in Singapore (Wang and Wong, 2004), show that there is a high level of interest in becoming entrepreneurs among students. The results of the study in the US show that there is a significant gender disparity in entrepreneurial interest: entrepreneurship as a career was found lower among girls than among boys. However, African-American and Hispanic girls were found more likely to be interested in entrepreneurship than White/Caucasian girls. The results of the study also show that there are significant differences in social and relational motivations across both gender and ethnicity: girls interested in entrepreneurship were found more likely to be motivated in their career choices by social and relational factors, whereas boys interested in entrepreneurship were more motivated by autonomy. Financial gain was also found as a strong motivator for boys in general. Interestingly, when self-perceptions of leadership skills were asked, girls rated themselves higher than did boys, with the exception of perceived ability to manage money. The overall result of the study indicates that goals and motivations differ among boys and girls interested in entrepreneurship, and also, across ethnicity (Wilson et al., 2004). The results of the study in Singapore show that three background factors:

gender, family experience with business and educational level affect entrepreneurial interests. The gender factor was found as the most significant factor among the (seven) background factors and girls were found less interested in entrepreneurship. Family business experience was found the second most significant factor after gender. Interestingly, other factors including ethnicity, citizenship and family income status were found little independent effect on entrepreneurial interest. An overall result of the study indicates that although many students desire to run their own businesses, their business knowledge is insufficient and they are not prepared to take risk in order to realize their dreams (Wang and Wong, 2004).

The empirical results of the studies in the second stream in the literature that aim to investigate the entrepreneurial intention of students show, first of all, that intention-based models are very useful in understanding the role of personal orientation, social norms, and perceived feasibility in entrepreneurial intention (Audet, 2004; Li, 2006; Veciana, 2005). In order to evaluate the level of entrepreneurial intention among international students – Chinese and Indians – in the Midwest United States, Li (2006) used the TPB as an analytical model. The results of Li's study show that the entrepreneurial intention of international students was predicted significantly by personal orientation to entrepreneurship and perceived feasibility. Interestingly, social norms were found to be non-significant in this study. The results of Li's study also show that perceived feasibility was a stronger predictor of entrepreneurial intention than a person's desire to be an entrepreneur. Another study by Veciana et al. (2005) that aimed to assess and compare the attitudes of university students towards entrepreneurship in Catalonia and Puerto Rico used Krueger and Brazeal's (1994) entrepreneurial potential model that is based on Ajzen's TPB and Shapero and Sokol's EEM. The results of this study show that university students both in Catalonia and Puerto Rico have a positive perception of the desirability to set up new businesses. Comparative evaluation of the results of this study and the results of another survey made in Spain by the researchers show that this desirability has increased considerably in the past decades. However, regarding the perceptions of feasibility, the students found it more difficult to create a firm at present than in the past decades. The results also show that there are some differences between the students in Catalonia and Puerto Rico. In Catalonia a relationship seems to exist between the student's gender and the desire to be an entrepreneur, as well as intention, and the males have a higher desire and intention to create new firms, while in Puerto Rico a relationship between gender and the desire to be an entrepreneur and intention was not found. Similarly, while a relationship was found between the entrepreneurs working with relatives and intention in Catalonia, entrepreneurs working with relatives was not found to be an important factor in desire, feasibility and intention to create a new firm in Puerto Rico. The third study to which we refer here is a longitudinal study of the entrepreneurial intentions of university students in a business administration programme conducted by Audet (2004). The results of Audet's study confirmed the results from previous studies: perceptions of the desirability and feasibility of starting a business significantly explain entrepreneurial intentions. In addition, the results of Audet's study show that entrepreneurial intentions vary over time. As an overall evaluation, Audet has stated that, as the temporal stability of intentions is a condition for an

intention-based model to accurately predict behaviour, the link between entrepreneurial intentions and actual venture creation may prove difficult to establish.

Although the number of empirical studies is very limited, the studies that we have reviewed in this section show that intention-based models are well suited for entrepreneurship studies. Nevertheless, these studies were aimed at explaining the formation of intention, and were not concerned with the connection between intention and action. The question concerns what factors influence the shift from intention to action is a challenge for future research. To introduce our exploratory research, we will now first pay some attention to the higher educational system in the Netherlands.

3. Higher Education in a Multicultural Environment: The Case of the Netherlands

The relationship between culture and business has been extensively studied by Hofstede (1997, 2001) with a particular focus on the intricate interrelationships between national cultures (behaviours, attitudes, perceptions) and organizational cultures. On the basis of his operational model on organization culture measurement, he was able to demonstrate that there is a persistent variety in various cultural groupings that are of decisive influence on the performance of societies and organizations and that are rather robust as well. In his work, he made a distinction between six determining characteristics ('dimensions' of societies and organizations which provide a consistent explanation for differences in performance, viz. small vs. large power distance, individualism vs. collectivism, masculinity vs. femininity, weak vs. strong uncertainty avoidance, long- vs. short-term orientation, and indulgence vs. restraint. Hofstede's seminal contributions on cultural and organizational sociology have generated a wealth of applied studies world-wide. For our study on the inclination of students to opt for an entrepreneurial career, it seems thus reasonable to hypothesize that cultural determinants may have a significant impact on students' career choice. In the context of our study, we will investigate in particular the importance of a foreign migrant background of students in the Netherlands.

Over the last few decades – with an increasing influx of foreign migrants – institutions of higher education are increasingly operating in a multicultural environment in many European countries (Bie and Weert, 1998; Wolff, 2003). The number of students of foreign origin (especially from non-Western countries) in the European higher education system is increasing, and student populations are becoming more and more diverse. However, students of foreign origin are still under-represented in higher education, and they encounter more problems in entering higher education and during their study period than native students (Wolff, 2003). On the other hand, given the ageing population in Europe, the main source of demographic growth and the driver of future educational expansion is immigration (Marginson et al., 2007). Therefore, the recruitment and the retention of students of foreign origin are attracting ever-increasing attention in European higher education. In addition, European higher education itself is becoming more multicultural in several respects.

Like most of the other European countries, the Netherlands is increasingly becoming a multicultural society. The population of ethnic minority groups has grown since the late 1960s and the projections by Statistics Netherlands (CBS) suggest that the rate of migrants will grow from one in five in 2006 to almost one in three (29 per cent) in 2050. Today, especially in larger urban areas, more than 50 per cent of the under-25 age group belong to one or more ethnic minority groups and they represent a growing population of young people at all levels of education. However, as also observed in other European countries, despite the progress made, students of foreign origin in the Netherlands still remain disadvantaged, perform lower than the native Dutch, and the level of school dropout among students of foreign origin is higher than among native Dutch young people (Choenni, 2007; Muskens, 2006).

Similar problems are observed in higher education as well. In the Netherlands, there is a dual system of higher education: universities and universities for professional education (HBO, the highest level of vocational education). There is only one level of secondary education (the highest) that grants access to universities (VWO), and therefore access to university institutions is most difficult. For HBO there are three access levels (vocational secondary education, HAVO and VWO), and hence access to HBOs is easier. About two-thirds of all students are enrolled in the HBOs rather than in the research-intensive universities (Marginson et al., 2007). The largest number of students of foreign origin can be found in HBOs (Choenni, 2007; Marginson et al., 2007).

Although the proportion of students of foreign origin has increased over the years, they are still under-represented in higher education. Moreover, students of foreign origin have a higher dropout rate than that of native Dutch students (Bie and Weert, 1998; Choenni, 2007; Marginson et al., 2007; Wolff, 2003). According to the study *Facts and figures on the integration of ethnic minorities in the Netherlands* in 2006 (Choenni, 2007), the main reason for this is that students of foreign origin tend to move less into those forms of secondary education that qualify students for higher education.

The above-mentioned report (Choenni, 2007) states also that, albeit slowly, more and more non-Western students of foreign origin are graduating with a diploma. The percentage of non-Western students who graduated with a diploma was around 50 per cent in 2004. However, there is still a remarkable difference between non-Western and Dutch students. In 2004, the percentage of Dutch students graduating with a diploma was 17 per cent higher than non-Western students. It can be said that, on average, non-Western students round off their studies successfully in more time than native Dutch students.

Participation by non-Western minorities is a significant issue in the Netherlands and several activities have been initiated in order to serve ethnic minority students. The Ministry of Education, in collaboration with universities and HBOs, founded the National Expert Centre for Ethnic Minorities in Higher Education (ECHO) in 1995. The main objective of ECHO is

“to improve the access, retention, and graduation of ethnic minority students and to support universities and HBOs in developing policies for achieving equal opportunities and multiculturalism” (Bie and Weert, 1998: 6). ECHO can be seen as a policy tool of the national government for policy implementation. Several efforts are underway on both the government and institutional level to increase the participation of non-Western minorities. The government has encouraged higher education institutions to develop plans to increase the enrolments of ethnic populations and to improve completion rates. However, the relative participation and completion of non-western students remains an issue. Although non-Western students are enrolling in greater numbers, their success rates in graduating are markedly lower than those of the native Dutch. For the cohort who started education in 2000, the gap after five years was 20 percentage points at the HBOs and 10 percentage points at the universities. However, the proportion of non-Western students who leave after five years without degrees has fallen from 20 per cent to 15 per cent over the past six cohorts at the universities (Margison et al., 2007). These structural trends are encouraging for the participation in higher education of foreign students.

With regard to our study, another important initiative that has been developed is the newly developed Education and Entrepreneurship Programme. In order to imbue students with a more entrepreneurial spirit and a more positive attitude towards entrepreneurship, two ministries in The Netherlands: the Ministry of Economic Affairs and the Ministry of Education, Culture and Science, have recently started an Education and Entrepreneurship Programme (Bakkenes et al., 2009). As a part of this programme, six Centres of Entrepreneurship at universities and other institutes of higher education were set up. The main goal of these centres is to instill a more entrepreneurial attitude in students and to encourage them to pursue a more entrepreneurial career path. As this programme has recently started, it is too early to evaluate the results. However, the programme can be expected to have a positive impact especially on non-Western students, and increase their labour market participation as entrepreneurs.

4. Entrepreneurial Interest and Future Job Orientation of University Students in the Netherlands

4.1. Prefatory Remarks

The applied part of our paper is based on a survey conducted among university students in the Netherlands between September and December 2009. The survey was carefully designed on the basis of a preliminary study, the respondent selection criteria were precisely defined, and a research questionnaire was prepared before starting the survey. These respondent selection criteria were divided into six groups: (i) cities; (ii) universities and universities for professional education (HBOs); (iii) faculties; (iv) target groups; (v) gender; and (vi) sample. The Randstad metropolitan area, which includes the four big cities Amsterdam, Rotterdam, The Hague and Utrecht, was selected in order to conduct the survey. Then, four universities in these cities: the VU University Amsterdam (VU), University of Amsterdam (UVA), Erasmus

University and Utrecht University, and INHOLLAND, the largest university for professional education (HBO) in the Netherlands (INHOLLAND-Amsterdam Diemen, INHOLLAND-Rotterdam and INHOLLAND-Den Haag) were selected for the survey. However, during the survey – in order to complete the described sample – four more universities for professional education, including the Hogeschool van Amsterdam, the HES Rotterdam, the Haagse Hogeschool, and the Hogeschool Utrecht, were added to the survey. As students with ethnic backgrounds are over-represented in HBOs in the Netherlands, it was decided, as a research criterion, to distribute 50 per cent of the research questionnaires in selected universities and the other 50 per cent in selected HBOs. Another respondent selection research criterion was the selection of faculties. As students with ethnic background are over-represented in two particular faculties: the Faculty of Economics and Business Administration and the Faculty of Law, it was decided to deliver 50 per cent of the questionnaires to these two faculties, and the other 50 per cent to the other faculties. As target groups, six dominant socio-cultural and ethnic groups in the Netherlands, viz. Dutch, Antilleans, Moroccan, Surinamese, Turkish and Others, were selected. Besides the ethnicity, gender was chosen as another criterion, and it was decided to give 50 per cent of the research questionnaires to female students. Finally, on the basis of these research criteria the sample was described. It was aimed to conduct 200 interviews per group, resulting in a total sample of 1200 university students. Table 1 shows the selected cities, universities and the sample by universities.

Table 1 The survey and the sample

CITIES	UNIVERSITIES	FEMALE STUDENTS	TOTAL STUDENTS	GENERAL TOTAL
AMSTERDAM:	VU University Amsterdam (VU)	77	150	449
	University of Amsterdam (UVA)	74	150	
	INHOLLAND Diemen & Hogeschool van Amsterdam	73	149	
ROTTERDAM:	Erasmus University	76	150	303
	INHOLLAND Rotterdam & HES Rotterdam	77	153	
THE HAGUE:	INHOLLAND Den Haag & Haagse Hogeschool	79	157	157
UTRECHT:	University of Utrecht	76	150	303
	Hogeschool Utrecht	79	153	
TOTAL:				1212

The survey was conducted on the basis of systematic research questionnaires. The questionnaire was designed in order to collect information especially in five areas including the students: (i) motivation for education and selected discipline; (ii) entrepreneurial interest;

(iii) risk-averse attitude; (iv) perceived leadership skills; and (v) entrepreneurial motivation. The questionnaires were applied in two ways: the questionnaires were delivered to students at the campuses of the selected universities and HBOs in order to be filled out, and were sent electronically to students via Student Associations. The Student Associations, in particular, Migrant Student Associations were used to reach the specific ethnic groups.

The survey was successfully carried out and encountered no major difficulty. However, the criteria used to select the sample made it especially difficult to complete the sample in the final stage of the survey. To complete the sample in accordance with the described criteria made the survey process longer than that the expected time frame and caused a delay. Nevertheless, the survey was successfully completed without any change in the criteria.

In Section 4.2 below, we discuss the empirical results of our survey, and then, in Section 4.3 we evaluate the results in a comparative way.

4.2. Empirical Results

We will now first present and discuss the empirical results of our survey in three sub-sections. In sub-section 4.2.1 we evaluate ethnic- and gender-based entrepreneurial interest among university students. Then, in sub-section 4.2.2, we compare ethnic- and gender-based risk-averse attitudes among university students. In sub-section 4.2.3 we discuss ethnic- and gender-based entrepreneurial motivation among university students.

4.2.1. Ethnic- and Gender-based Entrepreneurial Interest Among University Students

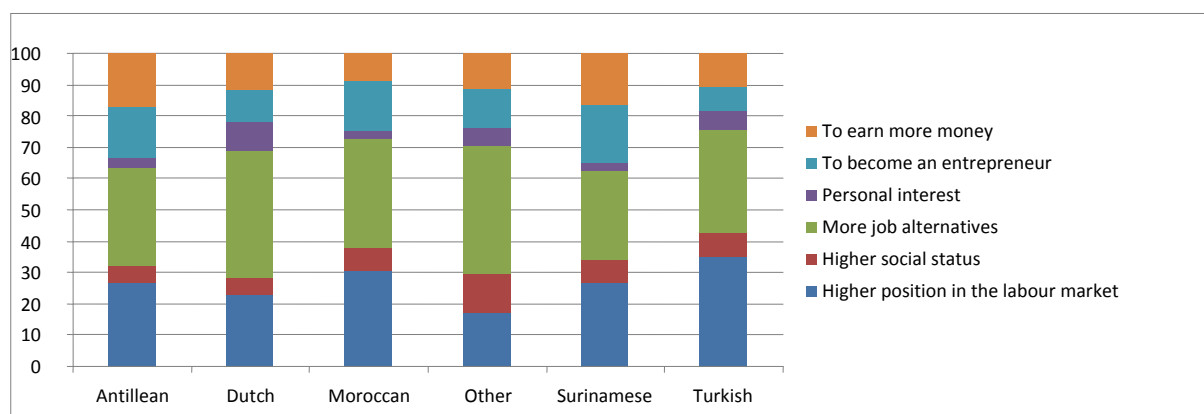
In order to measure ethnic- and gender-based entrepreneurial interest among university students, the students were asked three main questions:

1. Why did you choose to have an education at university/HBO level?
2. What kind of job position do you dream of or plan?
3. How much are you interested in starting/owning your own business?

The results of our survey show that the motivation for university education differs among socio-cultural and ethnic groups (Table 2). While Dutch students are more interested in having more job alternatives, Turkish and Moroccan students are more interested in having a higher position in the labour market, and Surinamese, Antillean and Moroccan students have a higher interest in becoming an entrepreneur. The results also show that Surinamese and Antillean students are more money-oriented.

Table 2 'Ethnic' motivation for university education (percentages)

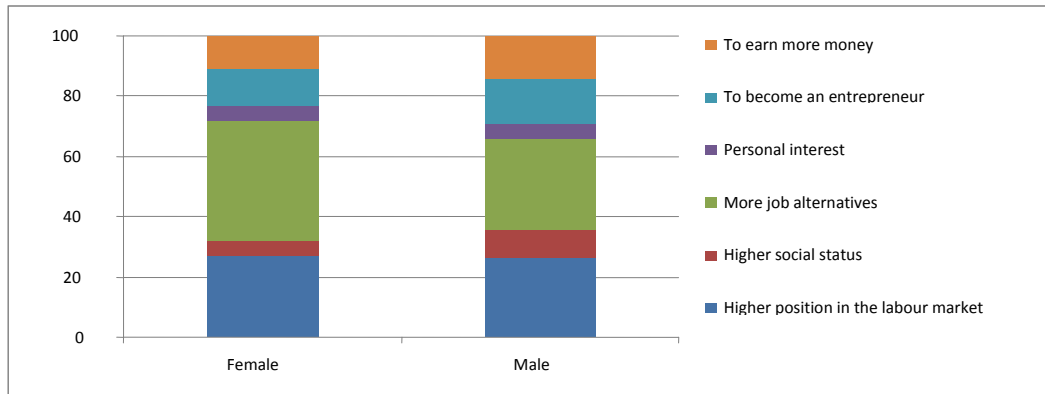
	Higher position in the labour market	Higher social status	More job alternatives	Personal interest	To become entrepreneur or self-employed	To earn more money
Antillean	27	5	32	3	16	17
Dutch	23	5	41	9	10	12
Moroccan	31	7	35	2	16	9
Other	17	13	41	6	12	11
Surinamese	27	7	29	2	18	16
Turkish	35	8	33	6	8	11
Total	26	8	35	5	14	13



The results also show that there are some gender-based differences in motivation for university education. While female students are more interested in more job alternatives and a higher position in the labour market, males have a greater interest in higher social status and in becoming an entrepreneur. Male students are also more money-oriented (Table 3).

Table 3 'Gender' motivation for university education (percentages)

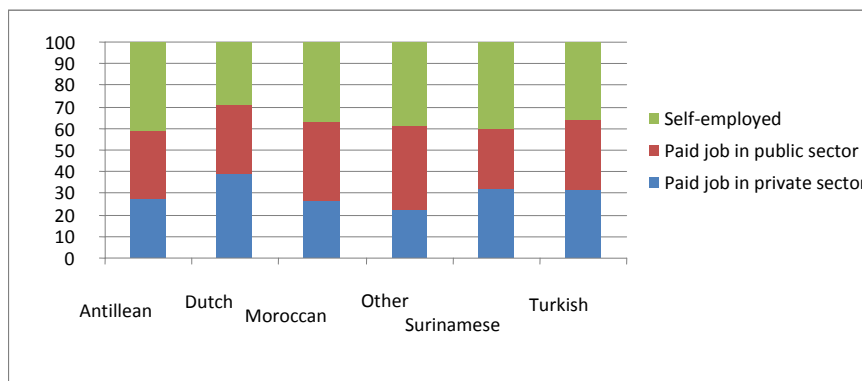
	Higher position in the labour market	Higher social status	More job alternatives	Personal interest	To become an entrepreneur or self-employed	To earn more money
Female	27	6	40	5	12	11
Male	26	9	30	5	15	14
Total	26	8	35	5	14	13



The differences are also observed among the students from different socio-cultural and ethnic background in terms of the future job position that they dream of or plan for (Table 4). The results of our survey show that Dutch students are more interested in a paid job in the private sector, and less interested in self-employment. In contrast, Antillean and Surinamese students have the greatest interest in self-employment. While Moroccan students are more interested in a paid job in the public sector, Turkish students have a greater interest in self-employment.

Table 4 'Ethnic' dreams about future job position (percentages)

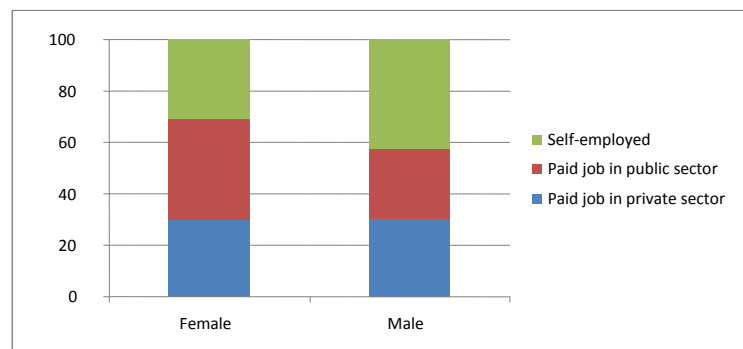
	Paid job in private sector	Paid job in public sector	Self-employed
Antillean	27	32	41
Dutch	39	33	29
Moroccan	27	37	37
Other	23	39	39
Surinamese	32	27	40
Turkish	32	32	36
Total	30	33	37



Gender-based differences are also observed with respect to the future job positions that students dream of or plan. While females are more interested in a paid job in the public sector, males have the greatest interest in self-employment (Table 5).

Table 5 'Gender' dreams about future job position (percentages)

	Paid job in private sector	Paid job in public sector	Self-employed
Female	30	39	31
Male	30	27	43
Total	30	33	37



The results of our survey show that entrepreneurial interest is quite high mainly among students from a different socio-cultural and ethnic background to the native population. According to our survey results, around 70 per cent of all ethnic groups have an entrepreneurial interest (Table 6). Antillean, Surinamese and Turkish students are more entrepreneurially-oriented than other groups. While Turkish students have the highest rate among students who find starting their own business extremely important, Antillean and Surinamese students follow Turkish students with the highest rate among students who find starting their own business very important.

As observed in our interpretation of the motivation to have an education at university/HBO level and of dreams of future job positions, once again we observe gender-based differences in entrepreneurial interest. The results of our survey show that males have a higher entrepreneurial interest than females (Table 7).

Table 6 'Ethnic entrepreneurial interest (percentages)

	definitely important	not important	somewhat important	very important	extremely important
Antillean	8	15	32	27	17
Dutch	11	17	39	22	11
Moroccan	9	20	30	23	18
Other	9	20	34	17	19
Surinamese	7	24	29	27	13
Turkish	7	17	33	21	23
Total	9	19	33	23	17

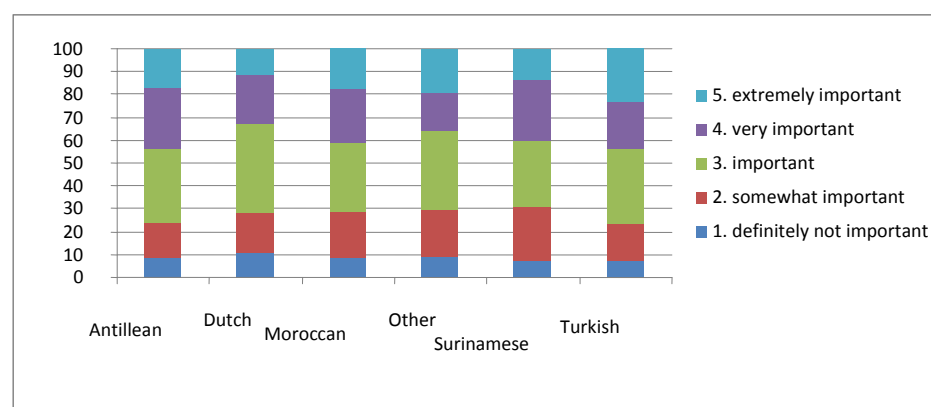
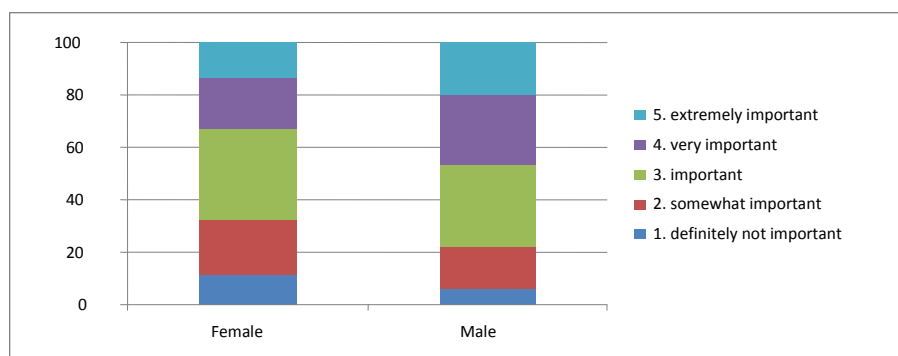


Table 7 'Gender' entrepreneurial interest (percentages)

	definitely important	not important	somewhat important	very important	extremely important
Female	11	21	35	19	14
Male	6	16	31	27	20
Total	9	19	33	23	17



4.2.2. Ethnic- and Gender-based Risk-averse Attitude Among University Students

Entrepreneurship is strongly related to a risk-averse attitude. Therefore, an entrepreneurial interest among university students would be expected to depend on how students rate themselves in taking risks. The results of our survey show that Antillean and Other migrant students exhibit much higher risk-taking behaviour. Turkish students also exhibit high risk-taking behaviour (Table 8). As can be expected, there are gender-based differences in taking risk: male students have a higher risk-taking behaviour than female students (Table 9).

Table 8 'Ethnic' risk-taking behaviour (percentage shares)

	1	2	3	4	5
Dutch	6	15	42	24	13
Antilleans	7	11	34	31	19
Surinamese	7	14	41	26	11
Turkish	4	14	39	28	13
Moroccan	2	12	50	25	10
Other	3	12	41	25	18
Total	5	13	41	27	14

Notes: 1= not risk taker, 5= extremely risk taker

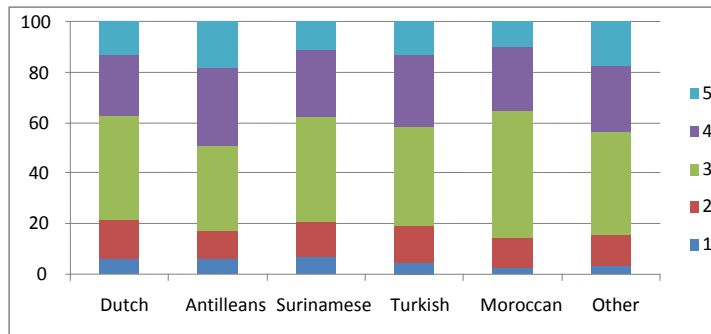
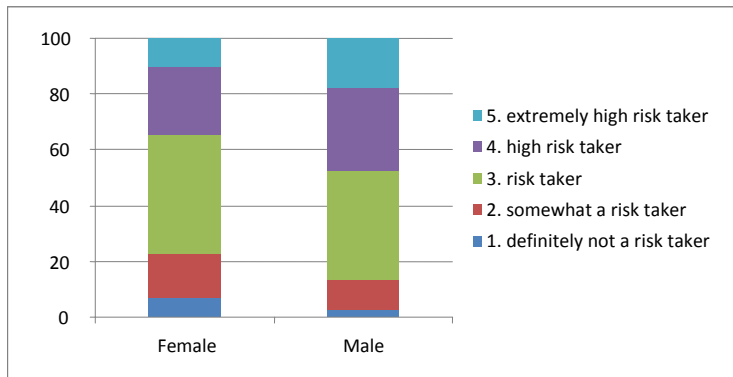


Table 9 'Gender' risk-taking behaviour (percentage shares)

	1	2	3	4	5
Female	7	16	43	24	10
Male	3	10	39	30	18
Total	5	13	41	27	14



4.2.3. Ethnic- and Gender-based Entrepreneurial Motivation Among University Students

In order to highlight the most important factors that may motivate students to become entrepreneurs in the future, around 20 potentially important factors were presented to the respondent, and the students were asked to rate these factors. Among 20 factors, the following 6 factors were rated by students as the most motivating factors. These factors are: (i) being respected by family and friends; (ii) being one's own boss; (iii) making lots of money; (iv) having/earning prestige; (v) using one's own skills and ability; and (vi) building something for the family. However, as in indicated in our analysis of the entrepreneurial interest, some ethnic- and gender-based differences are observed once more in entrepreneurial motivation.

Being respected by family and friends has emerged as one of the most motivating factors to become an entrepreneur, especially for some ethnic groups. The results of our survey show that family and friends are important and a motivating factor to become an entrepreneur for Moroccan and Turkish students, whereas Dutch students do not care very much about being respected by family and friends, and it is not a motivating factor for them to become an entrepreneur (Table 10).

Table 10 'Ethnic' motivation for entrepreneurship: Being respected by family and friends (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Antillean	14	19	33	21	13
Dutch	25	25	21	15	14
Moroccan	16	18	21	20	25
Other	13	25	29	20	13
Surinamese	18	21	28	15	18
Turkish	14	23	22	20	21
Total	16	22	26	19	17

The results of our survey also show that being respected by family and friends is more important for males than for females (Table 11). Being respected by family and friends is not an important motivating factor for females to become an entrepreneur. It would seem that entrepreneurial motivation is affected by ‘external factors’ for males and ‘internal factors’ for females.

Table 11 ‘Gender’ motivation for entrepreneurship: Being respected by family and friends (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Female	20	23	25	17	15
Male	13	21	27	19	20
Total	16	22	26	18	17

Another important factor that motivates students to become an entrepreneur is to be their own boss. The results of our survey show that Surinamese, Turkish and Moroccan students have the highest motivation for being their own boss (Table 12). Dutch students, on the contrary, have the lowest motivation for being their own boss.

Table 12 ‘Ethnic’ motivation for entrepreneurship: Being own boss (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Antillean	4	9	33	29	24
Dutch	6	20	31	23	20
Moroccan	6	13	27	32	22
Other	9	15	26	26	25
Surinamese	6	12	33	20	29
Turkish	6	12	26	28	29
Total	6	14	29	26	25

In general, the results of our survey show that there are some gender-based differences in entrepreneurial interest and entrepreneurial motivation of university students. However, in some motivating factors including also to be one’s own boss, we cannot find any gender-based difference. Being their own boss is equally important for males and females (Table 13).

Table 13 ‘Gender’ motivation for entrepreneurship: Being their own boss (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Female	5	9	25	28	33
Male	5	7	26	26	36
Total	5	8	26	27	34

Obviously, one of the most important motivating factors for entrepreneurship is making lots of money. University students also rated this as an important factor to become an entrepreneur. According to our survey results, Surinamese, Turkish and Antillean students have the highest motivation for making lots of money, whereas Moroccan students have the lowest motivation for making lots of money (Table 14).

Table 14 ‘Ethnic’ motivation for entrepreneurship: Making lots of money (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Antillean	7	8	33	38	15
Dutch	5	12	32	31	20
Moroccan	11	12	31	26	20
Other	9	9	27	24	32
Surinamese	2	8	37	37	16
Turkish	4	8	26	34	28
Total	6	9	31	31	22

The results of our survey show also that entrepreneurial motivation of making lots of money is higher for male students than for female students (Table 15). Making lots of money seem to be less important for females.

Table 15 ‘Gender’ motivation for entrepreneurship: Making lots of money (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Female	7	11	32	30	20
Male	6	8	30	33	24
Total	6	9	31	31	22

Having/earning prestige was also rated as an important motivating factor by university students. The results of our survey show that Surinamese, Turkish and Antillean students have the highest motivation for having/earning prestige (Table 16). Although their entrepreneurial motivation is lower than for migrant students, Dutch students have also a high motivation for having/earning prestige. Interestingly, Moroccan students have the lowest motivation for having/earning prestige.

Table 16 ‘Ethnic’ motivation for entrepreneurship: Having/earning prestige (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Antillean	4	17	30	33	17
Dutch	5	11	35	31	18
Moroccan	10	13	28	29	20
Other	6	14	32	25	22
Surinamese	4	14	31	35	16
Turkish	2	9	37	24	28
Total	5	13	32	30	20

The results of our survey show that there are important gender-based differences in entrepreneurial motivation for having/earning prestige. The entrepreneurial motivation of having/earning prestige is higher for male students than for female students (Table 17). It seems that having/earning prestige is less important as a motivating factor for females.

Table 17 ‘Gender’ motivation for entrepreneurship: Having/earning prestige (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Female	6	17	32	27	18
Male	4	9	32	32	22
Total	5	13	32	30	20

Another important factor that motivates university students to become an entrepreneur is to use their own skills and abilities. The results of our survey show that Antillean, Dutch, Turkish and Other students have the highest motivation for using own skills and abilities (Table 18). An interesting result from our survey is that the use of their own skills and abilities is more important for females than for males (Table 19).

Table 18 'Ethnic' motivation for entrepreneurship: To use their own skills and abilities (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Antillean	6	11	25	27	31
Dutch	3	9	27	38	22
Moroccan	9	8	32	27	23
Other	4	10	27	31	29
Surinamese	3	9	36	28	24
Turkish	1	17	28	31	23
Total	4	11	29	31	25

Table 19 'Gender' motivation for entrepreneurship: To use their own skills and abilities (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Female	3	13	25	35	24
Male	5	9	33	27	26
Total	4	11	29	31	25

The final important motivating factor for entrepreneurship rated high by university students is to build something for the family. The results of our survey show that Turkish and Moroccan students have a higher motivation to build something for the family, whereas Dutch, Surinamese, and Other students are less family-oriented (Table 20).

Table 20 'Ethnic' motivation for entrepreneurship: To build something for the family (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Antillean	5	22	31	21	20
Dutch	11	25	26	25	14
Moroccan	13	9	23	36	19
Other	14	23	32	15	16
Surinamese	16	23	27	22	12
Turkish	3	21	28	24	24
Total	10	21	28	24	17

The results also show that males have a slightly higher motivation to build something for the family than females. However, there is no clear gender-based difference in motivation to build something for the family (Table 21).

Table 21 ‘Gender’ motivation for entrepreneurship: To build something for the family (percentages)

	definitely not important	somewhat important	important	very important	extremely important
Female	10	17	32	25	16
Male	10	24	24	23	19
Total	10	21	28	24	17

4.3. A Comparative Evaluation of the Empirical Results

The empirical results of our survey highlight the diverse attitudes and career motivations of university students. The results underline, on the one hand, how different socio-cultural and ethnic backgrounds can determine the diverse attitudes and career motivations, and, on the other, independently from the socio-cultural and ethnic backgrounds, the impact of gender differences on career choice. An overall comparative evaluation of empirical results highlights the following ethnic- and gender-based differences in the entrepreneurial interest and motivation of university students:

- Migrant male students are more entrepreneurial than both natives and female students.
- Interest in entrepreneurship as a career is lower among Dutch youth than among migrant youth.
- Interest in entrepreneurship as a career is lower among females than among males.
- Migrants are more risk-taking than natives.
- Females are less risk-taking than males.
- Males are more motivated by ‘external factors’ such as family and friends, prestige and also financial gain.
- Females are more motivated by ‘internal factors’ such as using their own skills and abilities.
- Factors such as being their own boss, being flexible, being independent, etc. are equally important for both males and females.

These empirical results fully support our hypotheses. Our findings show that: (i) the level of interest in entrepreneurship is related to ethnicity and migrants’ interest is greater; (ii) the level of interest in entrepreneurship is related to gender and males’ interest is greater; (iii) the motivation factors are different for males and females, males are more motivated by ‘external

factors', and females by 'internal factors'; and (iv) females have a lower propensity for risk-taking.

Our results show that migrants are more entrepreneurial than natives. However, as explained in the previous sections, migrants do not make up a homogeneous group, and there are also many differences between migrant groups. Some migrant groups exhibit a higher entrepreneurial interest and motivation than other migrant groups. In addition, some migrant groups are more risk-taking than the other migrant groups. From these results, it seems that cultural differences play an important role in determining diverse attitudes and career motivations.

5. Image of the Future Labour Market in the Netherlands

Like other European countries, the Netherlands is increasingly becoming a multicultural society. In a multicultural society, undoubtedly the main task of higher education institutions is to educate and train students for future employment in a multicultural society. For a multicultural society it is of vital importance to use the potential of young people from various backgrounds as much as possible. In order to train all students to operate in a multicultural society, it may also be necessary to match the composition of the academic staff to the diversity of society, and include more staff from different ethnic backgrounds.

The results of our study highlight the great potential of young people for the future labour market in the Netherlands. The overall finding is that there is a very high entrepreneurial interest especially among the migrant students. These preliminary results of our study demonstrate only the entrepreneurial interest of students on the basis of their personal and situational factors. However, the results highlight also the determinant role of a multicultural environment, especially on motivational factors towards an entrepreneurial career. A further analysis of our survey, especially the application of intention-based models, may enable us to predict the entrepreneurial intention of students and to measure the effects of desirability, social norms and feasibility towards entrepreneurial intention. In a multicultural environment, especially social norms can be expected to play an important role in the formation of entrepreneurial intention. How to transform the intention into action is an important issue and it is not very easy to predict the probability of realisation. However, in case of the realisation of today's tendencies of university students, the future labour market in The Netherlands will exhibit interesting features. On the basis of our research results it seems that the following stylized future image is plausible:

- Paid jobs in the private sector will be held by the native Dutch.
- Paid jobs in the public sector will be held by females.
- The public sector may become more 'feminine' or, in other words, the 'feminization' of the public sector can be expected in the near future in the Netherlands.
- Jobs in the public sector may also be held more by Moroccans.

- New jobs will be created by immigrants, in particular by Antilleans, Surinamese and Turks.
- Gender differences will decrease, and male and female involvement will become closer in business.
- Cultural differences will remain in the near future. In particular, Turks and Moroccans will have a more traditional family-oriented approach.
- And, therefore, ethnic networks will continue to shape labour market developments in the near future.

The results of our study have obviously important implications for strategic thinking on future policy and educational initiatives.

References

- Ajzen, I. (1991) 'The Theory of Planned Behavior', *Organizational Behavior and Human Decision Processes*, 50: 179-211.
- Audet, J. (2004) 'A Longitudinal Study of the Entrepreneurial Intentions of University Students', *Academy of Entrepreneurship Journal*, 10(1): 3-15.
- Bakkenes, M., Schouwstra, M., Snijders, J. (eds.) (2009) *Ten years of entrepreneurship policy: a global overview*. The Tenth Edition of the Series 'Entrepreneurship in The Netherlands', Ministry of Economic Affairs The Netherlands and EIM Business & Policy Research.
- Bie, M. de, Weert, E. de (1998) 'The Responsiveness of Dutch Higher Education to a Multicultural Environment', *Higher Education in Europe*, XXIII (1).
- Choenni, C. (2007) *Facts and figures on the integration of ethnic minorities in the Netherlands in 2006*. Citizenship and Integration Department (Directie Inburgering & Integratie), Ministry of Justice.
- Gorman, G., Hanlon, D., King, W. (1997) 'Some research perspectives on entrepreneurship education, enterprise education and education for small business management: a ten-year literature review', *International Small Business Journal*, 15(3): 56-77.
- Hofstede, G. (1997) *Culture and Organizations*, New York: MacGrawhill.
- Hofstede, G. (2001) *Culture's Consequences*, Thousand Oaks: Sage.
- Katz, J.A. (2003) 'The chronology and intellectual trajectory of American entrepreneurship education 1876-1999', *Journal of Business Venturing*, 18: 283-300.
- Kourilsky, M.L., Walstad, W.B. (1998) 'Entrepreneurship and Female Youth: Knowledge, Attitudes, Gender Differences, And Educational Practices', *Journal of Business Venturing*, 13: 77-88.
- Krueger, N.F., Brazeal, D.V. (1994) 'Entrepreneurial Potential and Potential Entrepreneurs', *Entrepreneurship Theory and Practice*, 18(2): 91-104.
- Krueger, N.F., Reilly, M.D., Carsrud, A.L. (2000) 'Competing Models of Entrepreneurial Intentions', *Journal of Business Venturing*, 15(5-6): 411-432.
- Li, W. (2006) 'Entrepreneurial Intention Among International Students: Testing A Model Of Entrepreneurial Intention', *USASBE 2006 Proceedings*, United States Association for Small Business and Entrepreneurship.
- Marginson, S., Weko, T., Channon, N., Luukkonen, T., Oberg, J. (2007) *Thematic Review of Tertiary Education: The Netherlands: Country Note*. Organisation for Economic Co-operation and Development (OECD), Directorate for Education, Education and Training Policy Division.
- Meyer, G.D. (2001) 'The Evolution of Entrepreneurship Education: Current State of the Art', Plenary address to the ICSB World Conference, online available at (<http://www-bus.colorado.edu/faculty/meyer/evolution/index.htm>)
- Muskens, G. (2006) *Integration and Generations in the Netherlands*. Summary Report, Presented at the EU Conference 'Integration Indicators and Generational Change, Berlin, 14-15 June 2006.
- Olfert, M.R., Partridge, M. (2011) 'Creating the Cultural Community: Ethnic Diversity vs. Agglomeration', *Spatial Economic Analysis*, 6(1): 25-55.
- Ottaviano, G.I.P., Peri, G. (2006) 'The Economic Value of Cultural Diversity', *Journal of Economic Geography*, 6: 9-44
- Shapero, A., Sokol, L. (1982) 'The Social Dimensions of Entrepreneurship', in C. Kent, D. Sexton, and K.H. Vesper (eds.) *The Encyclopedia of Entrepreneurship*. Englewood Cliffs, NJ: Prentice-Hall. 72-90.
- Timmons, J.A. (1994) *New Venture Creation – Entrepreneurship for the 21st Century*. Irwin, Boston.
- Veciana, J.M., Aponte, M., Urbano, D. (2005) 'University Students' Attitudes Towards Entrepreneurship: A Two Countries Comparison', *International Entrepreneurship and Management Journal*, 1: 165-182.
- Wang, C.K., Wong, P. (2004) 'Entrepreneurial interest of university students in Singapore', *Technovation*, 24: 163-172.
- Wilson, F., Marlino, D., Kickul, J. (2004) 'Our Entrepreneurial Future: Examining the Diverse Attitudes and Motivations of Teens Across Gender and Ethnic Identity', *Journal of Developmental Entrepreneurship*, 9(3): 177-197.

Wolff, R. (2003) 'Minority Students and Higher Education in Europe', 'Thick' paper outline for first meeting LIS/Maxwell EU Center Conference 'Immigration in Europe'-group, 17-18 July 2003, Luxembourg.

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